RESPONSE TO RESTRICTION REQUIREMENT

Serial Number: 10/702,228 Filing Date: November 5, 2003

Title: VECTORS FOR DIRECTIONAL CLONING

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REMARKS

In response to the Restriction Requirement mailed June 30, 2006, Applicant provisionally elects, with traverse, claims 1-12 (Group I), directed to a vector comprising a recognition site for a first restriction enzyme that generates a 3' TA overhang which is 5' to a recognition site for a second restriction enzyme which generates blunt ends, which vector, once digested with the first and second restriction enzymes and ligated to a DNA fragment comprising an open reading frame flanked by an end generated by *SgfI* and an end generated by a third restriction enzyme which has infrequent restriction sites in cDNAs or open reading frames from at least one species and generates blunt ends, yields a recombinant vector comprising the open reading frame. Reconsideration and withdrawal of the Restriction Requirement, in view of the remarks herein, is respectfully requested.

The Restriction Requirement is traversed on the basis that the claimed inventions are closely related. That is, claims directed to a vector comprising a recognition site for a first restriction enzyme that generates a 3' TA overhang which is 5' to a recognition site for a second restriction enzyme which generates blunt ends, which vector, once digested with the first and second restriction enzymes and ligated to a DNA fragment comprising an open reading frame flanked by an end generated by Sgfl and an end generated by a third restriction enzyme which has infrequent restriction sites in cDNAs or open reading frames from at least one species and generates blunt ends, yields a recombinant vector comprising the open reading frame (claims 1-12; Group I) are related to claims directed to a vector comprising a first open reading frame which includes a recognition site for a first restriction enzyme that generates a 3' TA overhang and a recognition site for a second restriction enzyme that is not in the open reading frame generates blunt ends, which vector, once digested with the first and second restriction enzymes and ligated to a DNA fragment comprising a second open reading flanked by an end generated by <u>SgfI</u> and a third restriction enzyme which has infrequent restriction sites in cDNAs or open reading frames from at least one species and generates blunt ends, yields a recombinant vector comprising a third open reading frame comprising the first and second open reading frames, which third open reading frame encodes a fusion peptide or protein (claim 13; Group II), claims directed to a vector comprising a ribosome binding site which optionally overlaps by one

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nucleotide with a SgfI recognition site and a recognition site for a first restriction enzyme that generates blunt ends, which vector, once digested with SgfI and the first restriction enzyme and ligated to a DNA fragment comprising an open reading frame encoding a peptide or polypeptide flanked by

5' CGCCATGX₁Y₁ (SEQ ID NO:2) 3' TAGCGGTACX₂Y₂ (SEQ ID NO:71)

and a blunt end generated by a second restriction enzyme that has infrequent restriction sites in cDNAs or open reading frames from at least one species and generates blunt ends, yields a recombinant vector which encodes the peptide or polypeptide, wherein X₁ is the first codon which is 3' to the start codon for the open reading frame, wherein X_2 is the complement of X_1 . wherein Y_1 is the remainder of the open reading frame, and wherein Y_2 is the complement of Y_1 (claim 14; Group III), claims directed to a support having a plurality of recombinant vectors, two or more of which comprise an open reading frame for a different polypeptide, wherein at least one recombinant vector comprises a promoter and a first open reading frame which is flanked by two exchange sites, wherein the exchange sites are formed by ligation of a vector comprising the promoter which is 5' to a recognition site for a first restriction enzyme that generates a 3' TA overhang which is 5' to a recognition site for a first restriction enzyme which generates blunt ends, which vector is digested with the first and second restriction enzymes, and a DNA sequence comprising the first open reading frame flanked by an end generated by SgfI and an end generated by a third restriction enzyme which has infrequent restriction sites in cDNAs or open reading frames from at least one species and generates blunt ends and a method of preparing such a support (claims 15-19 and 23-27; Group IV), methods of using the vectors to prepare a plurality of mutagenized recombinant vectors (claim 36, Group VII; and claims 37-38, Group VIII), and libraries having the vectors (claims 41-42 and 67, Group XIV; and claims 47-48 and 67, Group XVII).

The Restriction Requirement is also traversed on the basis that Restriction Requirements are optional in all cases. M.P.E.P § 803. If the search and examination of at least a portion of an entire application can be made without serious burden, the Examiner must examine it on the merits, even though it arguably may include claims to distinct or independent inventions.

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M.P.E.P. § 803. Moreover, it is submitted that Applicants should not be required to incur the additional costs associated with the filing of <u>multiple</u> divisional applications in order to obtain protection for the claimed subject matter. Due to the relatedness of the subject matter of at least the claims in Group I and Groups II-IV, VII-VIII, XIV and XVII) as discussed above, those Groups can be efficiently and effectively searched in a single search with no additional burden placed on the Examiner. In particular, as the claims in Group I and Groups II, III, XIV and XVII are in the <u>same class</u> (class 435) <u>and subclass</u> (subclass 320.1) for search purposes, those Groups can be efficiently and effectively searched in a single search with no additional burden placed on the Examiner.

Further, Applicant's Representatives respectfully request rejoinder of the claims in Groups VII-VIII (methods of using vectors) with the claims in Group I, upon a notice of allowable subject matter for the claims in Group I.

Thus, the Restriction Requirement is properly traversed. Accordingly, reconsideration and withdrawal of the Restriction Requirement is respectfully requested.

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CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6959 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commission for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this day of July 2006.

Name